LNP™ STAT-KON™ Compound Ultem_UC1200
Americas: COMMERCIAL

LNP STAT-KON ULTEM_UC1200 is a 12% carbon fiber reinforced PEI. High modulus with ESD characteristics for high-heat applications.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1330	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1330	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	5.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5.1	%	ASTM D 638
Tensile Modulus, 5 mm/min	82900	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2250	kgf/cm²	ASTM D 790
Flexural Stress, brk, 2.6 mm/min, 100 mm span	1960	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	79800	kgf/cm²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	84300	kgf/cm²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	42	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	3	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	63	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	214	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	213	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	208	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	210	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.44E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	3.24E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, flow	1.44E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	3.96E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	105	°C	UL 746B

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.
(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
THERMAL			
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.32	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.12 - 0.22	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.3 - 0.5	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	7.5	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	4.E+02	Ohm-cm	ASTM D 257
Surface Resistivity	2.E+05	Ohm	ASTM D 257
Hot Wire Ignition {PLC)	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
Static Decay, 5000V to <50V	0.01	< seconds	FTMS101B
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.57	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	380 - 425	°C
Nozzle Temperature	375 - 420	°C
Front - Zone 3 Temperature	380 - 425	°C
Middle - Zone 2 Temperature	370 - 420	°C
Rear - Zone 1 Temperature	360 - 405	°C
Mold Temperature	135 - 165	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

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